

R E M A R K S

Claims 12, 13, 15 and 16 currently remain in the application. Claims 1-11, 14 and 17 were canceled and claims 12 and 15 are herein amended.

Claims 1-11 and 17 are herein canceled and hence their rejection is now a moot point and will not be discussed. Claim 12 is herein amended to incorporate the limitations of claim 14, claim 14 being accordingly canceled and claim 15 being amended to change its dependence.

In Paragraph 8 of said Final Office Action, claims 12-17 (before the amendment herein) were rejected under 35 U.S.C. 103 over Egan in view of Pettit and further in view of Schmider. The Examiner correctly stated that Egan and Pettit fail to disclose parameter setting means adjusting parameters according to kinds of elements to be detected and then cited Schmider.

Schmider, however, does not disclose or even hint at setting any PID parameters. The parameters considered by Schmider are “numerical values for each of the temperature steps, as for example the slope of the temperature ramp, the plateau temperature, duration of the temperature plateaus, as well as the selected gas being used during the temperature ramp and plateau periods” (column 3, lines 23-27). Control of parameters of this kind has been known, as admitted as prior art and illustrated in Figs. 5 and 6 of the present application. The gist of the present invention is to go further by carrying out finer temperature controls as shown in Fig. 4 by the PID control method.

The Examiner is therefore requested to recognize (1) that Schmider is not teaching any PID parameter setting means and (2) that none of the cited references is suggesting or even hinting at any merit to be gained by combining PID control in units of milliseconds with atomic absorption.

Pettit was cited evidently for disclosing self-tuning digital PID controller for application to plastics extruders but reactions are much quicker with atomic absorption than with plastic extrusion. The amount of sample for atomic absorption is minute and hence the result of temperature control is much more influential in atomic absorption than in plastic extrusion. Applicant's argument is based on the absence of prior art suggesting combining

PID control and atomic absorption. The Examiner's argument that it is obvious seems to be based only on hindsight which, however, is not to be relied upon in rejecting a claim under 35 U.S.C. 103. Unless the Examiner can come up with such a prior art reference, therefore, the claims now pending should be deemed allowable.

Respectfully submitted,



Keiichi Nishimura
Registration No. 29,093

February 9, 2004
BEYER WEAVER & THOMAS, LLP
P.O. Box 778
Berkeley, CA 94704-0778
Telephone: (510) 843-6200
Telefax: (510) 843-6203